

## Chapter 296-876 WAC

### ((PORTABLE)) LADDERS, PORTABLE AND FIXED

AMENDATORY SECTION (Amending WSR 05-20-068, filed 10/4/05, effective 1/1/06)

**WAC 296-876-100 Scope.** This chapter applies to portable and fixed ladders, including job-made wooden ladders.

**Exemption:** This chapter does not apply to ~~((portable ladders used))~~:  
✍ Portable ladders used by the fire services for fire combat that are covered by Safety standards for fire fighters, chapter 296-305 WAC;  
~~((OR))~~  
✍ ~~((For))~~ Agriculture activities covered by Safety standards for agriculture, chapter 296-307 WAC.

AMENDATORY SECTION (Amending WSR 05-20-068, filed 10/4/05, effective 1/1/06)

**WAC 296-876-500 ~~((Training))~~ Fixed ladder design and construction--Section contents.**

**Your responsibility:**

~~((To train employees who use portable ladders.~~

~~Training~~

~~WAC 296-876-50005.))~~ To make sure fixed ladders installed on or after December 1, 2006, meet design and construction requirements.

Design and construction--Fixed ladders installed on or after December 1, 2006.

WAC 296-876-50010

### NEW SECTION

**WAC 296-876-50010 Design and construction--Fixed ladders installed on or after December 1, 2006.**

**You must:**

✎ Make sure fixed ladders installed **on or after** December 1, 2006, meet the design and construction requirements of ANSI A14.3-2002, American National Standard for Ladders-Fixed-Safety Requirements.

**Note:** Ladders will be considered to have met the requirements of this section if they meet the design and construction requirements of ANSI A14.3, American National Standard for Ladders-Fixed-Safety Requirements, in effect at the time they are installed.

AMENDATORY SECTION (Amending WSR 05-20-068, filed 10/4/05, effective 1/1/06)

**WAC 296-876-600 ((Definitions.)) Fixed ladder design and construction--Section contents.**

**((Cleat**

~~A ladder crosspiece used in climbing or descending. Also called a step or rung.~~

**~~Extension ladder~~**

~~A nonself supporting portable ladder consisting of two or more sections. The sections travel in guides or brackets that allow the length of the ladder to be changed. The size is designated by the sum of the lengths of each section, measured along the side rails.~~

**~~Failure~~**

~~The ladder or ladder component loses the ability to carry the load, breaks, or separates into component parts.~~

**~~Job-made ladder~~**

~~A ladder that is made, not commercially manufactured, to fit a specific job situation. They are for temporary use until a particular phase of construction is completed or until permanent stairways or fixed ladders are ready to use.~~

**~~Ladder~~**

~~A device having steps, rungs, or cleats that can be used to climb or descend.~~

**~~Ladder type~~**

~~The designation that identifies the maximum intended load (working load) of the ladder. Ladder types are as follows:~~

<b>Duty Rating</b>	<b>Ladder Type</b>	<b>Use</b>	<b>Maximum Intended Load (Pounds)</b>
Extra Heavy-Duty	IA	Industry, utilities, contractors	300

Heavy-Duty	I	Industry, utilities, contractors	250
Medium-Duty	II	Painters, offices, light maintenance	225
Light-Duty	III	General household use	200

### **~~Maximum intended load~~**

~~The total load of all persons, equipment, tools, materials, transmitted loads, and other loads reasonably anticipated to be applied to a ladder or ladder component at any one time. Sometimes referred to as working load.~~

### **~~Portable ladder~~**

~~A ladder that can be readily moved or carried.~~

### **~~Reinforced plastic~~**

~~A plastic that has high strength fillers embedded in the base resin to increase strength.~~

### **~~Reinforced plastic ladder~~**

~~A ladder whose side rails are reinforced plastic. The crosspieces, hardware, and fasteners may be made of metal or other suitable material.~~

### **~~Rung~~**

~~A ladder crosspiece used in climbing or descending. Also called a cleat or step.~~

### **~~Single ladder~~**

~~A nonself-supporting portable ladder, nonadjustable in length, consisting of one section. The size is designated by the overall length of the side rail.~~

### **~~Single-rail ladder~~**

~~A portable ladder with crosspieces mounted on a single rail. Single rail ladders are prohibited from use.~~

### **~~Special-purpose ladder~~**

~~A portable ladder that is made by modifying or combining design or construction features of the general-purpose types of ladders in order to adapt the ladder to special or specific uses.~~

### **~~Step~~**

~~A ladder crosspiece used in climbing or descending. Also called a cleat or rung.~~

### **~~Stepladder~~**

~~A self-supporting portable ladder, nonadjustable in length, with flat steps and hinged at the top. The size is designated by the overall length of the ladder measured along the front edge of the side rails.~~

### **~~Trestle ladder~~**

~~A self-supporting portable ladder, nonadjustable in length, consisting of two sections hinged at the top to form equal~~

~~angles with the base. The size is designated by the length of the side rails measured along the front edge.~~

**Working length**

~~The length of a nonself-supporting ladder, measured along the rails, from the base support point of the ladder to the point of bearing at the top.))~~ **Your responsibility:**

To make sure fixed ladders installed before December 1, 2006, meet design and construction requirements.

Design and construction--Fixed ladders installed before December 1, 2006.

WAC 296-876-60005

Design loads.

WAC 296-876-60010

Pitch.

WAC 296-876-60015

Welding.

WAC 296-876-60020

Ladder surfaces.

WAC 296-876-60025

Rungs, cleats and steps.

WAC 296-876-60030

Side rails.

WAC 296-876-60035

Clearances.

WAC 296-876-60040

Step-across distance.

WAC 296-876-60045

Extensions and grab bars.

WAC 296-876-60050

Hatches.

WAC 296-876-60055

Platforms.

WAC 296-876-60060

Protective structures and equipment.

WAC 296-876-60065

Cages.

WAC 296-876-60070

Wells.

WAC 296-876-60075

Ladder safety devices.

WAC 296-876-60080

## NEW SECTION

**WAC 296-876-60005 Design and construction--Fixed ladders installed before December 1, 2006.**

**You must:**

✎ Make sure fixed ladders installed **before** December 1, 2006, meet the requirements of WAC 296-876-60010 through 296-876-60080.

**Note:** Ladders will be considered to have met the requirements of this section if they meet the design and construction requirements of ANSI A14.3, American National Standard for Ladders-Fixed-Safety Requirements, in effect at the time they are installed.

## NEW SECTION

**WAC 296-876-60010 Design loads.**

**You must:**

✎ Make sure each ladder is able to support, without failure, the total of the following loads:

- At least two loads of two hundred and fifty pounds each, concentrated between any two consecutive attachments.

- Any additional concentrated loads of two hundred and fifty pounds each determined from the anticipated use of the ladder.

- Anticipated loads caused by all of the following that apply:

- ✂ Ice buildup.

- ✂ Winds.

- ✂ Rigging attached to the ladder, including the load to be lifted.

- ✂ Impact loads resulting from the use of ladder safety devices.

✎ Make sure the design of rails, supports, and fastenings includes:

- Live loads to be supported by the ladder

**and**

- The weight of the ladder and everything attached to it.

✎ Consider all live loads to be concentrated at the point or points that will cause the maximum stress on the ladder or structural member.

✎ Make sure each step or rung is capable of supporting a

single concentrated load of at least two hundred fifty pounds applied in the middle of the step or rung.

✎ Make sure the design stresses for wood components of ladders meet the requirements and specifications of ANSI A14.1, American National Standard for Ladders-Portable Wood-Safety Requirements, in effect when the ladder was installed.

✎ Make sure fastenings are designed to meet the ladder load requirements.

#### NEW SECTION

##### **WAC 296-876-60015 Pitch.**

###### **You must:**

✎ Make sure the pitch of the ladder is no greater than ninety degrees from the horizontal.

**Note:** ✎ The preferred pitch of fixed ladders is within the range of seventy-five to ninety degrees from the horizontal. Ladders with a pitch range of sixty to seventy-five degrees from the horizontal are considered substandard and are only permitted if necessary to meet the installation requirements.  
✎ Fixed stairs are an alternative for installations where a pitch angle of less than sixty degrees is necessary. See Fixed industrial stairs, WAC 296-24-765, in the General Safety and Health Standards, chapter 296-24 WAC.

#### NEW SECTION

##### **WAC 296-876-60020 Welding.**

###### **You must:**

✎ Make sure welding meets the requirements of the ANSI A14.3, American National Standard for Ladders-Fixed-Safety Requirements, in effect at the time the ladder was installed.

#### NEW SECTION

##### **WAC 296-876-60025 Ladder surfaces.**

###### **You must:**

✎ Make sure all parts and surfaces of the ladder are free of splinters, sharp edges, burrs, or projections that may be hazardous to persons using the ladder.

## NEW SECTION

### **WAC 296-876-60030 Rungs, cleats and steps.**

#### **You must:**

- ✎ Make sure rungs have a minimum diameter as follows:
  - Rungs of wood ladders are at least one and one-eighth inches.
  - Rungs of metal ladders subject to unusually corrosive exposures, such as individual metal rungs imbedded in concrete which serve as access to pits and to other areas under floors, are at least one inch.
  - Rungs of all other metal ladders are at least three-quarters inch.
- ✎ Make sure rungs, cleats, and steps are all of the following:
  - Parallel.
  - Level.
  - Uniformly spaced throughout the length of the ladder.
  - Spaced so the distance from the centerline of one rung to the centerline of the next rung does not exceed twelve inches.

**Exception:** The vertical distance from the ground, floor, or roof at the access level to the first rung may be adjusted within a range of fourteen inches.

#### **You must:**

- ✎ Make sure the minimum inside clear width of the stepping surface of rungs, steps, or cleats is sixteen inches.
- ✎ Make sure individual rung or step-type ladders have rungs or steps that are shaped so that a person's foot cannot slide off the end.

## NEW SECTION

### **WAC 296-876-60035 Side rails.**


#### **You must:**

- ✎ Make sure the shape of the side rail:
  - Provides an adequate gripping surface**and**
  - Is uniform throughout the length of climb.
- ✎ Make sure a side rail that has been spliced to obtain a longer length is at least equivalent in strength to a one-piece side rail made of the same material.

## NEW SECTION


### **WAC 296-876-60040 Clearances.**


#### **You must:**

 Make sure ladders without wells or cages are at least thirty inches from the nearest permanent object on the climbing side, measured perpendicular to the ladder from the centerline of the rungs, cleats, or steps.

**Exemption:** When unavoidable obstructions are encountered, the minimum perpendicular clearance between the centerline of the rungs, cleats, or steps and an obstruction on the climbing side may be reduced to twenty-four inches if a deflection device is installed to guide persons around the obstruction.

#### **You must:**

 Make sure ladders without wells or cages have a clear width from the nearest permanent object on each side of the ladder of at least fifteen inches, measured from the center of the rungs, cleats, or steps.


 Make sure the distance from the centerline of the rungs, cleats, or steps to the nearest permanent object in back of the ladder is at least seven inches.

**Exemption:** Fixed ladders in elevator pits may reduce the minimum clearance from the ladder to the nearest permanent object in back of the ladder to four and one-half inches.

## NEW SECTION

### **WAC 296-876-60045 Step-across distance.**


#### **You must:**

 Make sure a through ladder at the point of access or egress has a step-across distance, measured from the centerline of the steps or rungs to the nearest edge of the landing area, that is:

- Not less than seven inches

**or**

- Greater than twelve inches.

 Make sure a side-step ladder at the point of access or egress has a step-across distance, measured from the side rail of the ladder to the nearest edge of the landing area, that is:

- Not less than seven inches

**or**

- Greater than twelve inches.



## NEW SECTION

### **WAC 296-876-60050 Extensions and grab bars.**

#### **You must:**

✎ Make sure the side rails of through or side-step ladders extend forty-two inches above the top of the access level or landing platform.

**Note:** For a parapet ladder, the access level is:  
- The roof if the parapet is cut to permit passage through it  
**or**  
- The top of the parapet if it is continuous and uncut.

#### **You must:**

✎ Make sure the extension of a through ladder above the access level or landing platform has:

- Steps or rungs omitted from the extension

**and**

- Clearance between the side rails that is:

✂ Not less than twenty-four inches

**or**

✂ Greater than thirty inches.

**Exemption:** The maximum clearance between side rails of the extension may be increased to thirty-six inches if the ladder has a ladder safety device.

#### **You must:**

✎ Make sure the side rails of through or side-step ladders extend forty-two inches above the top of the access level or landing platform.

✎ Make sure side-step ladders have the steps or rungs and the side rails continuous in the extension.

✎ Make sure individual rung-step ladders are extended at least forty-two inches above the access level or landing platform by:

- Continuing the rung spacings as horizontal grab bars

**or**

- Providing vertical grab bars that have the same lateral spacing as the vertical legs of the rungs.

**Exemption:** Extensions are not required for individual rung-step ladders with access openings through a manhole or hatch.

#### **You must:**

✎ Make sure grab bars:

- Are at least four inches from the nearest permanent object in back of the grab bar, measured from the centerline of the grab bar

**and**

- Do not extend beyond the rungs on the climbing side of the ladder.

## NEW SECTION

### **WAC 296-876-60055 Hatches.**

#### **You must:**

✎ Make sure counterbalanced hatch covers open at least seventy degrees from the horizontal.

✎ Make sure the inside clear width of the hatch is a nominal thirty inches.

✎ Make sure the distance from the centerline of the rungs or cleats to the edge of the hatch opening on the climbing side, measured perpendicular to the ladder, is:

- Not less than twenty-four inches

**or**

- Greater than thirty inches.

✎ Make sure hatches with clearance on the climbing side of the ladder that is between twenty-four and twenty-seven inches are fitted with a deflector plate mounted at an angle of sixty degrees from the horizontal.

**Note:** The springs or other counterbalance mechanisms for the hatch may project into the hatch opening provided they do not reduce clearance to less than twenty-four inches and a deflector plate is installed to guide persons around the obstruction.

## NEW SECTION

### **WAC 296-876-60060 Platforms.**

#### **You must:**

✎ Make sure landing platforms for side-step ladders extend at least thirty inches on the climbing side of the ladder.

✎ Make sure landing platforms are:

- At least thirty inches wide

**and**

- Equipped with standard railings and toeboards placed to allow safe access to the ladder.

**Reference:** Requirements for standard railings and toeboards are in Railing, toeboards, and cover specifications, WAC 296-24-75011, the General Safety and Health Standards, chapter 296-24 WAC.

#### **You must:**

✎ Make sure the top rung or step of the ladder is level with the landing served by the ladder.

✎ Make sure the spacing from the landing platform to the first rung below the platform of a through ladder is the same as the rung spacing of the ladder.

✎ Make sure, if two or more separate ladders are used to reach an elevated work area, that the ladders are offset with a platform or landing between them.

**Exemption:** A platform or landing is not required when a portable ladder is used to reach a fixed ladder on structures such as utility towers and billboards where the bottom of the fixed ladder is elevated to limit access.

## NEW SECTION

### **WAC 296-876-60065 Protective structures and equipment.**

#### **You must:**

✎ Make sure a cage, well, or ladder safety system is provided if:

- The length of climb is less than twenty-four feet

**and**

- The top of the ladder is more than twenty-four feet above the ground, floor, or roof.

✎ Make sure a ladder with a single length of climb that is equal to or greater than twenty-four feet is either:

- Equipped with a ladder safety device

**or**

- Uses multiple ladder sections and meets all of the following:

✂ Each section is provided with a cage or well.

✂ The length of climb of any ladder section is not greater than fifty feet.

✂ Each ladder section is offset from adjacent sections.

✂ Landing platforms are provided at maximum intervals of fifty feet.

**Exemption:** During construction activities, a self-retracting lifeline with landing platforms provided at maximum intervals of one hundred and fifty feet may be used instead of a ladder safety device or multiple ladder sections.

## NEW SECTION

### **WAC 296-876-60070 Cages.**

#### **You must:**

✎ Make sure the cage meets all of the following:

- Extends at least forty-two inches above the top of the platform or above the point of access and egress at the top of the ladder.

- Has provisions for accessing and egressing the platform or the point of access or egress of the ladder.

- There is at least twenty-seven inches, but not more than thirty inches, from the cage to the centerline of the step or rung at all points except where the cage flares at the bottom of the ladder.

- The cage is at least twenty-seven inches wide.


- There are no projections inside the cage.

-  Make sure the bottom of the cage is:

- At least seven feet but not more than eight feet above the point of access to the bottom of the ladder

**and**


- Flared at least four inches all around within the distance between the bottom horizontal band and the next higher band.

-  Make sure vertical bars are:

- Spaced at intervals of nine and one-half inches or less on center around the circumference of the cage

**and**

- Fastened to the inside of the horizontal bands.

-  Make sure the horizontal bands meet all of the following:

- The vertical intervals between horizontal bands is not more than four feet on center.


- The horizontal bands of ladders with side rails are fastened to the side rails.


- The horizontal bands of individual-rung ladders are fastened directly to the structure, building, or equipment.

## NEW SECTION

### **WAC 296-876-60075 Wells.**

#### **You must:**

-  Make sure there is at least twenty-seven inches, but not more than thirty inches, from the centerline of the step or rung to the inside face of the well on the climbing side of the ladder.


-  Make sure the inside clear width is at least thirty inches.

-  Make sure the well:

- Completely encircles the ladder

**and**

- Is free of projections.

-  Make sure the bottom of the wall on the access side is at least seven feet, but not more than eight feet, above the point of access to the bottom of the ladder.

## NEW SECTION

### **WAC 296-876-60080 Ladder safety devices.**

#### **You must:**

✎ Make sure ladder safety devices and related support systems meet all of the following:

- Are capable of withstanding, without failure, the test drop of a five hundred pound weight for a free-fall distance of eighteen inches.

- The device does not require a person to continually hold, push, or pull any part of the device and allows them to have both hands free to grip the ladder.

- In the event of a fall, the device:

- ✂ Is activated within two feet

**and**

- ✂ Limits the fall velocity to seven feet per second or less.

- Uses a connection between the carrier or lifeline and the point of attachment on the full body harness that is not longer than nine inches.

✎ Make sure ladder safety devices with rigid carriers have mountings that:

- Are attached at each end of the carrier

**and**

- Have intermediate mountings that are all of the following:

- ✂ Spaced along the entire length of the carrier in accordance with the manufacturer's recommendations.

- ✂ Installed within one foot below each splice on the carrier.

- ✂ Have a maximum distance between mountings that is twenty-five feet or less.

✎ Make sure ladder safety devices with flexible carriers have:

- Mountings that are attached at each end of the carrier

**and**

- Cable guides that are spaced at least twenty-five feet, but no further than forty feet, apart along the entire length of the carrier.

✎ Make sure the design and installation of mountings and cable guides does not reduce the design strength of the ladder.

## NEW SECTION

### **WAC 296-876-700 Fixed ladders inspection and maintenance-- Section contents.**

#### **Your responsibility:**

To make sure fixed ladders are inspected and maintained properly.

Protection against corrosion and deterioration.

WAC 296-876-70005

Inspection and repair.

WAC 296-876-70010

## NEW SECTION

### **WAC 296-876-70005 Protection against corrosion and deterioration.**

#### **You must:**

✎ Paint or otherwise treat metal ladders or metal parts to resist rust and corrosion if they are:

- Exposed to the elements

**or**

- Located where rust or corrosion could be expected.

✎ Treat wood ladders used in conditions where decay may occur with a nonirritating preservative.

✎ Make sure wood ladders are not coated with an opaque covering except for the minimum amount necessary for identification and warning information which may be placed on one face only of a side rail.

✎ Treat the interface between different materials or use other means to prevent:

- One material from damaging or having a harmful effect on another material

**and**

- Electrolytic action between dissimilar metals.

## NEW SECTION

### **WAC 296-876-70010 Inspection and repair.**

#### **You must:**

✎ Keep ladders in safe condition.  
✎ Have a competent person inspect a ladder for visual defects:

– Periodically

**and**

– After any occurrence that could affect safe use.

✎ Make sure any ladder with structural damage or other hazardous defect is immediately removed from service.

**Note:** ✎ Structural damage includes, but is not limited to, any of the following:

– Broken or missing rungs, cleats, or steps.

– Broken or split rails.

– Corroded components.

– Bolts and welds missing or not secure.

✎ A ladder is considered to be removed from service if any of the following are done:

– It is marked to identify it as defective.

– It is tagged with "do not use" or similar language.

– It is blocked so that it cannot be used, for example, by using a plywood attachment that spans several rungs.

#### **You must:**

✎ Make sure repairs restore the ladder to a condition meeting its original design criteria.

## NEW SECTION

### **WAC 296-876-800 Fixed ladder use--Section contents.**

#### **Your responsibility:**

To use fixed ladders safely.

Designed load.

WAC 296-876-80005

Climbing and descending.

WAC 296-876-80010

## NEW SECTION

### **WAC 296-876-80005 Designed load.**

#### **You must:**

✎ Make sure not to overload ladders. Do not exceed either

the:

- Maximum intended load
- or**
- Manufacturer's rated capacity.

**Definition:**

The **maximum intended load** is the total load of all persons, equipment, tools, materials, transmitted loads, and other loads reasonably anticipated to be applied to a ladder or ladder component at any one time.

NEW SECTION

**WAC 296-876-80010 Climbing and descending.**

**You must:**

- ✎ Have both hands free to hold on to the ladder.
- ✎ Face the ladder when climbing or descending.
- ✎ Keep ladders free of oil, grease, or other slippery materials.

NEW SECTION

**WAC 296-876-900 Definitions.**

**Cage.** An enclosure that encircles the climbing space of a fixed ladder. It is fastened to the ladder side rails or to the structure and may also be called a cage or basket guard.

**Cleat.** A ladder crosspiece used in climbing or descending. Also called a step or rung.

**Equivalent.** Alternative design, material or method to protect against a hazard. You have to demonstrate it provides an equal or greater degree of safety for employees than the method, material or design specified in the rule.

**Extension ladder.** A nonself-supporting portable ladder consisting of two or more sections. The sections travel in guides or brackets that allow the length of the ladder to be changed. The size is designated by the sum of the lengths of each section, measured along the side rails.

**Failure.** The ladder or ladder component loses the ability to carry the load, breaks, or separates into component parts.

**Fastenings.** A fastening is a device to attach a ladder to a structure, building, or equipment.

**Fixed ladder.** A ladder permanently attached to a structure, building, or equipment.



**Grab bars.** Handholds placed adjacent to or as an extension above ladders for the purpose of providing access beyond the limits of the ladder.

**Job-made ladder.** A ladder that is made, not commercially manufactured, to fit a specific job situation. They are for temporary use until a particular phase of construction is completed or until permanent stairways or fixed ladders are ready to use.

**Individual-rung/step ladder.** A fixed ladder consisting of individual steps or rungs mounted directly to the side or wall of the structure, building, or equipment.

**Ladder.** A device having steps, rungs, or cleats that can be used to climb or descend.

**Ladder safety device.** Any device, other than a cage or well, designed to arrest the fall of a person using a fixed ladder.

**Ladder type.** The designation that identifies the maximum intended load (working load) of the ladder. Ladder types are as follows:

Duty Rating	Ladder Type	Use	Maximum Intended Load (Pounds)
Extra Heavy-Duty	IA	Industry, utilities, contractors	300
Heavy-Duty	I	Industry, utilities, contractors	250
Medium-Duty	II	Painters, offices, light maintenance	225
Light-Duty	III	General household use	200

**Landing.** Any area such as the ground, roof, or platform that provides access or egress to a ladder.

**Maximum intended load.** The total load of all persons, equipment, tools, materials, transmitted loads, and other loads reasonably anticipated to be applied to a ladder or ladder component at any one time. Sometimes referred to as working load.

**Pitch.** The included angle between the horizontal and the ladder, measured on the opposite side of the ladder from the climbing side.

**Portable ladder.** A ladder that can be readily moved or carried.

**Reinforced plastic.** A plastic that has high-strength fillers embedded in the base resin to increase strength.

**Reinforced plastic ladder.** A ladder whose side rails are

reinforced plastic. The crosspieces, hardware, and fasteners may be made of metal or other suitable material.

**Rung.** A ladder crosspiece used in climbing or descending. Also called a cleat or step.

**Side-step ladder.** A fixed ladder that requires a person to step to the side of the ladder side rails to reach the landing.

**Single ladder.** A nonself-supporting portable ladder, nonadjustable in length, consisting of one section. The size is designated by the overall length of the side rail.

**Single-rail ladder.** A portable ladder with crosspieces mounted on a single rail. Single-rail ladders are prohibited from use.

**Special-purpose ladder.** A portable ladder that is made by modifying or combining design or construction features of the general-purpose types of ladders in order to adapt the ladder to special or specific uses.

**Step.** A ladder crosspiece used in climbing or descending. Also called a cleat or rung.

**Stepladder.** A self-supporting portable ladder, nonadjustable in length, with flat steps and hinged at the top. The size is designated by the overall length of the ladder measured along the front edge of the side rails.

**Through ladder.** A fixed ladder that requires a person to step between the side rails of the ladder to reach the landing.

**Trestle ladder.** A self-supporting portable ladder, nonadjustable in length, consisting of two sections hinged at the top to form equal angles with the base. The size is designated by the length of the side rails measured along the front edge.

**Well.** A walled enclosure around a fixed ladder that provides a person climbing the ladder with the same protection as a cage.

**Working length.** The length of a nonself-supporting ladder, measured along the rails, from the base support point of the ladder to the point of bearing at the top.

#### REPEALER

The following section of the Washington Administrative Code is repealed:

WAC 296-876-50005

Training.

PART J-1

WORKING SURFACES, GUARDING FLOORS AND WALL OPENINGS((,~~FIXED~~  
LADDERS))

Note: Requirements relating to portable ladders and fixed ladders have been moved to chapter 296-876 WAC, ((~~Portable~~))  
Ladders, portable and fixed.

**WAC 296-24-23507 Footwalks and ladders.** (1) Location of footwalks.

(a) If sufficient headroom is available on cab-operated cranes, a footwalk shall be provided on the drive side along the entire length of the bridge of all cranes having the trolley running on the top of the girders. To give sufficient access to the opposite side of the trolley, there should be provided either a footwalk mounted on the trolley, a suitable footwalk or platform in the building, or a footwalk on the opposite side of the crane at least twice the length of the trolley.

(b) Footwalks should be located to give a headroom not less than 78 inches. In no case shall less than 48 inches be provided. If 48 inches of headroom cannot be provided, footwalks should be omitted from the crane and a stationary platform or landing stage built for workers making repairs.

(2) Construction of footwalks.

(a) Footwalks shall be of rigid construction and designed to sustain a distributed load of at least 50 pounds per square foot.

(b) Footwalks shall have a walking surface of antislip type.

Note: Wood will meet this requirement.

(c) Footwalks should be continuous and permanently secured.

(d) Footwalks should have a clear passageway at least 18 inches wide except opposite the bridge motor, where they should be not less than 15 inches. The inner edge shall extend at least to the line of the outside edge of the lower cover plate or flange of the girder.

(3) Toeboards and handrails for footwalks. Toeboards and handrails shall be in compliance with WAC 296-24-750 through 296-24-75011 and WAC 296-800-260.

(4) Ladders and stairways.

(a) Gantry cranes shall be provided with ladders or stairways extending from the ground to the footwalk or cab platform.

(b) Stairways shall be equipped with rigid and substantial metal handrails. Walking surfaces shall be of an antislip type.

(c) Ladders shall be permanently and securely fastened in place and shall be constructed in compliance with (~~WAC 296-24-810 through 296-24-81011~~) chapter 296-876 WAC, Ladders, portable and fixed.

REPEALER

The following sections of the Washington Administrative Code are repealed:

WAC 296-24-810	Fixed ladders.
WAC 296-24-81001	Definitions.
WAC 296-24-81003	Design requirements.
WAC 296-24-81005	Specific features.
WAC 296-24-81007	Clearance.
WAC 296-24-81009	Special requirements.
WAC 296-24-81011	Pitch.
WAC 296-24-81013	Maintenance and use.

AMENDATORY SECTION (Amending WSR 04-18-080, filed 8/31/04, effective 11/1/04)

**WAC 296-78-71001 General.** (1) Construction when not specifically covered in these standards shall be governed by such other standards adopted by the department of labor and industries as may apply.

(2) All buildings, docks, tramways, walkways, log dumps and other structures shall be so designed, constructed, and maintained as to provide a safety factor of four. This means that all members shall be capable of supporting four times the maximum load to be imposed. This provision refers to buildings, docks and so forth designed and constructed subsequent to the effective date of these standards and also refers in all cases where either complete or major changes or repairs are made to such buildings, docks, tramways, walkways, log dumps and other structures.

(3) Basements on ground floors under mills shall be evenly surfaced, free from unnecessary obstructions and debris, and provided with lighting facilities in compliance with the requirements of the safety and health core rules, WAC 296-800-210.

(4) All engines, motors, transmission machinery or operating equipment installed in mill basements or ground floors shall be equipped with standard safeguards for the protection of workers.

(5) Flooring of buildings, ramps and walkways not subject to supporting motive equipment shall be of not less than two-inch wood planking or material of equivalent structural strength.

(6) Flooring of buildings, ramps, docks, trestles and other structure required to support motive equipment shall be of not less than full two and one-half inch wood planing or material of equivalent structural strength. However, where flooring is covered by steel floor plates, two inch wood planking or material of equivalent structural strength may be used.

(7) Walkways, docks, and platforms.

(a) Walkways, docks and platforms shall be constructed and maintained in accordance with the requirements of WAC 296-24-735 through 296-24-75011 and WAC 296-800-270.

(b) Maintenance. Walkways shall be evenly floored and kept in good repair.

(c) Where elevated platforms are used they shall be equipped with stairways or ladders in accordance with WAC 296-

24-765 through 296-24-81013, ~~((and))~~ WAC 296-800-250 and ~~((296-800-290))~~ chapter 296-876 WAC, Ladders, portable and fixed.

AMENDATORY SECTION (Amending WSR 01-11-038, filed 5/9/01, effective 9/1/01)

**WAC 296-78-71009 Stairways and ladders.** (1) Stairways shall be used in preference over ladders wherever possible. Stairways or ladders, whichever is used, shall be constructed and maintained in accordance with the provisions of WAC 296-24-75009 through 296-24-81013, ~~((and))~~ WAC 296-800-250 and ~~((296-800-290))~~ chapter 296-876 WAC, Ladders, portable and fixed.

(2) Doors shall not open directly on a flight of stairs.

(3) Permanent ladders shall be fastened securely at both top and bottom.

(4) Portable ladders shall not be used upon footing other than suitable type.

(5) Hooks or other means of securing portable ladders when in use, shall be provided.

(6) Portable ladders shall not be used for oiling machinery which is in motion.

AMENDATORY SECTION (Amending WSR 04-14-028, filed 6/29/04, effective 1/1/05)

**WAC 296-78-71017 Dry kilns.** (1) Dry kilns shall be so constructed upon solid foundations that tracks will not sag. Dry kilns shall be provided with suitable walkways. Each kiln shall have doors that operate from the inside and be provided with escape doors of adequate height and width to accommodate an average size man, that also operates from the inside, and shall be located in or near the main door. Escape doors shall swing in the direction of exit. Kiln doors and door carriers shall be fitted with safety devices to prevent the doors or carriers from falling.

(2) Ladders. A fixed ladder, in accordance with the requirements of ~~((WAC 296-24-810 through 296-24-81013 of the general safety and health standards and WAC 296-800-290 of the safety and health core rules))~~ chapter 296-876 WAC, Ladders, portable and fixed, or other means shall be provided to permit access to the roof. Where controls and machinery are mounted on the roof, a permanent stairway with standard handrail shall be

installed in accordance with the requirements of WAC ((~~296-800-290~~)) 296-800-250.

(3) A heated room shall be provided for the use of the kiln operator in inclement weather. He should remain in such room for at least ten minutes after leaving a hot kiln before going to cold outside air.

(4) Where operating pits are used, they shall be well ventilated, drained and lighted. Substantial gratings shall be installed at the kiln floor line. Steam lines shall be provided with insulation wherever exposed to contact by employees. Fans shall be enclosed by standard safeguards.

(5) Mechanical equipment. All belts, pulleys, blowers, and other exposed moving equipment used in or about kilns shall be guarded in accordance with chapter 296-806 WAC, Machine safety.



PART J

STAIRWAYS ((~~AND FIXED LADDERS~~))

Note: Requirements relating to portable ladders and fixed ladders have been moved to chapter 296-876 WAC, Ladders, portable and fixed.

AMENDATORY SECTION (Amending WSR 05-20-068, filed 10/4/05, effective 1/1/06)

**WAC 296-155-475 Scope and application.** This part applies to all stairways (~~((and fixed ladders))~~) used in construction, alteration, repair (including painting and decorating), and demolition workplaces covered under chapter 296-155 WAC, and also sets forth, in specified circumstances, when (~~((ladders and))~~) stairways are required to be provided.

**Reference:**

~~✎~~ Requirements for ladders used on or with scaffolds are located in chapter 296-874 WAC, Scaffolds.  
~~✎~~ Requirements for portable ladders and fixed ladders are located in chapter 296-876 WAC(~~((Portable ladders))~~).

AMENDATORY SECTION (Amending WSR 05-20-068, filed 10/4/05, effective 1/1/06)

**WAC 296-155-47501 Definitions applicable to this part.**

(1) (~~((Cleat means a ladder crosspiece of rectangular cross section placed on edge upon which a person may step while ascending or descending a ladder.~~

~~((2)) Double cleat ladder means a ladder similar in construction to a single cleat ladder, but with a center rail to allow simultaneous two-way traffic for employees ascending or descending.~~

~~((3)) Equivalent means alternative designs, materials, or methods that the employer can demonstrate will provide an equal or greater degree of safety for employees than the method or item specified in the standard.~~

~~((4)) (2) Failure means load refusal, breakage, or separation of component parts. Load refusal is the point where the structural members lose their ability to carry the loads.~~

~~((5) Fixed ladder means a ladder that cannot be readily moved or carried because it is an integral part of a building or structure. A side step fixed ladder is a fixed ladder that requires a person getting off at the top to step to the side of the ladder side rails to reach the landing. A through fixed ladder is a fixed ladder that requires a person getting off at the top to step between the side rails of the ladder to reach the landing. For the purpose of this standard, slip forms and scaffolds with built-in ladders permanently attached, are considered to be fixed ladders.~~

~~((6)) (3) Handrail means a rail used to provide employees with a handhold for support.~~

~~((7) Individual-rung/step ladders means ladders without a~~

~~side rail or center rail support. Such ladders are made by mounting individual steps or rungs directly to the side or wall of the structure.~~

~~(8) Landing means any area such as the ground, roof, or platform that provides access/egress for a ladder.~~

~~(9)) (4) Lower levels means those areas to which an employee can fall from a stairway or ladder. Such areas include ground levels, floors, roofs, ramps, runways, excavations, pits, tanks, material, water, equipment, and similar surfaces. It does not include the surface from which the employee falls.~~

~~((10) Maximum intended load means the total load of all employees, equipment, tools, materials, transmitted loads, and other loads anticipated to be applied to a ladder component at any one time.~~

~~(11)) (5) Nosing means that portion of a tread projecting beyond the face of the riser immediately below.~~

~~((12)) (6) Platform means a walking/working surface for persons, elevated above the surrounding floor or ground.~~

~~((13)) (7) Point of access means all areas used by employees for work-related passage from one area or level to another. Such open areas include doorways, passageways, stairway openings, studded walls, and various other permanent or temporary openings used for such travel.~~

~~((14)) (8) Riser height means the vertical distance from the top of a tread to the top of the next higher tread or platform/landing or the distance from the top of a platform/landing to the top of the next higher tread or platform/landing.~~

~~((15) Side step fixed ladder. See "fixed ladder."~~

~~(16) Single cleat ladder means a ladder consisting of a pair of side rails, connected together by cleats, rungs, or steps.~~

~~(17)) (9) Spiral stairway means a series of steps attached to a vertical pole and progressing upward in a winding fashion within a cylindrical space.~~

~~((18)) (10) Stairrail system means a vertical barrier erected along the unprotected sides and edges of a stairway to prevent employees from falling to lower levels. The top surface of a stairrail system may also be a "handrail."~~

~~((19) Through fixed ladder. See "fixed ladder."~~

~~(20)) (11) Tread depth means the horizontal distance from front to back of a tread (excluding nosing, if any).~~

~~((21)) (12) Unprotected sides and edges means any side or edge (except at entrances to points of access) of a stairway where there is no stairrail system or wall 36 inches (.9 m) or more in height, and any side or edge (except at entrances to points of access) of a stairway landing, or ladder platform where there is no wall or guardrail system 39 inches (1 m) or more in height.~~

REPEALER

The following sections of the Washington Administrative Code are repealed:

WAC 296-155-480	Fixed ladders.
WAC 296-155-48060	Training requirements.
WAC 296-155-48080	Appendix A.
WAC 296-155-48090	Reserved.

AMENDATORY SECTION (Amending WSR 05-01-054, filed 12/7/04, effective 3/1/05)

**WAC 296-874-40026 Meet these requirements when using ladder jack scaffolds.**

**You must:**

✎ Make sure the platform height is not higher than twenty feet (6.1 m).

✎ Make sure ladder jacks are designed and constructed so they rest:

- On the side rails and ladder rungs together;

**OR**

- Only on the rungs.

✎ Make sure ladder jacks that rest on rungs only have a bearing area that includes a length of at least ten inches (25.4 cm) on each rung.

✎ Make sure ladders used to support ladder jacks are:

- Type I (two hundred fifty pound rated capacity) or Type IA (300 pound rated capacity);

**AND**

- Are placed, fastened, or equipped with devices to prevent slipping.

**Note:** Ladders with a duty rating or weight capacity greater than a Type I ladder (250 pounds) satisfy the requirement to use a Type I or Type IA ladder.

**You must:**

✎ Make sure job-made ladders are not used to support ladder jack scaffolds.

✎ Make sure scaffold platforms are not bridged together.

**Reference:** ✎ There are specific fall protection requirements for employees using ladder jack scaffolds. Go to WAC 296-874-20056. (~~✎ Requirements for wood and metal ladders for general industry activities are found in other chapters:~~

~~— Portable ladders: Metal and wooden, WAC 296-800-290, are found in the safety and health core rules, chapter 296-800 WAC;~~

~~— Portable wood ladders, WAC 296-24-780, and portable metal ladders, WAC 296-24-795, are found in Working surfaces, guarding floors and wall openings, ladders, Part J 1, in the general safety and health standards, chapter 296-24 WAC;~~

~~✎ For construction activities, go to Ladders, WAC 296-155-480, in the safety standards for construction work, chapter 296-155-))~~

✎ Requirements for portable and fixed ladders are found in chapter 296-876 WAC, Ladders, portable and fixed.

AMENDATORY SECTION (Amending WSR 05-01-054, filed 12/7/04, effective 3/1/05)

**WAC 296-874-40038 Meet these requirements when using step, platform and trestle ladder scaffolds.**

**You must:**

✎ Make sure ladders used to support step, platform, and trestle ladder scaffolds are:

- Type I (250 pound rated capacity) or Type IA (300 pound rated capacity);

**AND**

- Placed, fastened, or equipped with devices to prevent slipping.

**Note:** Ladders with a duty rating or weight capacity greater than a Type I ladder (250 pounds) satisfy the requirement to use a Type I or Type IA ladder.

**You must:**

✎ Make sure job-made ladders are not used to support step, platform, and trestle ladder scaffolds.

**Reference:** ✎ There are specific fall protection requirements for employees using ladder jack scaffolds. Go to WAC 296-874-20056. ((~~✎ Requirements for wood and metal ladders are found in other chapters:~~  
~~For general industry activities, go to the following:~~  
~~✎ The safety and health core rules, chapter 296-800 WAC, and find portable ladders: Metal and wooden, WAC 296-800-290.~~  
~~✎ Working surfaces, guarding floors and wall openings, ladders, chapter 296-24 WAC, Part J-1, and find Portable wood ladders, WAC 296-24-780, and Portable metal ladders, WAC 296-24-795.~~  
~~For construction activities, go to the safety standards for construction work, and find ladders, WAC 296-155-480.))  
✎ Requirements for portable and fixed ladders are found in chapter 296-876 WAC, Ladders, portable and fixed.~~

**You must:**

✎ Make sure scaffold platforms are not placed higher than the second highest rung or step of the ladder supporting the platform.

✎ Make sure scaffold platforms are not bridged together.